Dataset:

Flight Data

What do we want to serve (Value + API):

Use cases:

The use case request and response templates are not final and at the time are in the form of:

```
{
     acronim: type = "description",
    *acronim: type = "description" // in the case of optional args
}
```

Using the "*" to denote if an argument is optional free's up the "?" to ask questions among ourselves This template is complete adlib and if there is a standard way of doing this please tell

Use Case 1:

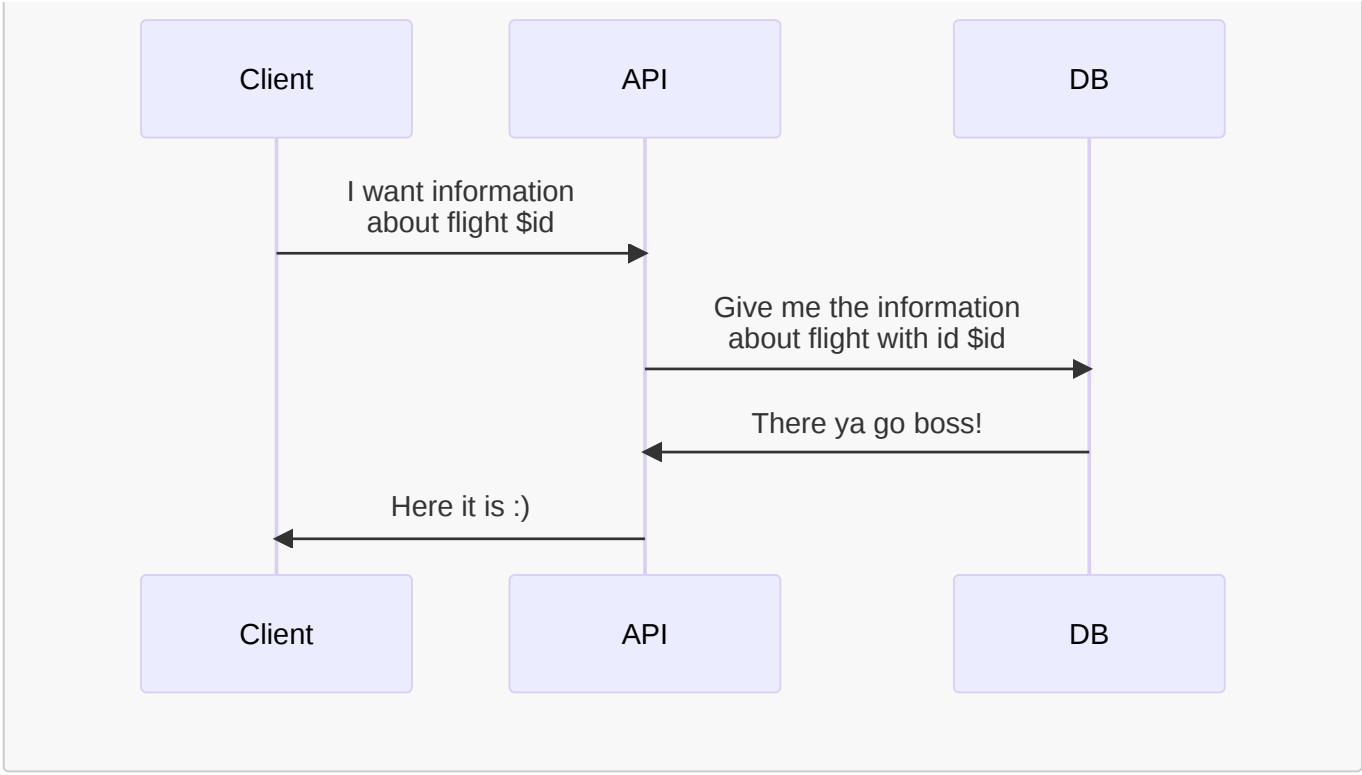
User will get general information about a flight in the dataset

- Endpoint: `/flights/:id`
- REST Type: GET
- Request parameters:

```
{
    id: number = "id"
}
```

- Response parameters:

```
{
    ori: string = "origin",
    dst: string = "destination",
    date: (date format?)="date",
    other_info: idk = "",
    ...
}
```



Use Case 2:

User will get reliability scores about airlines.

- Endpoint: `/airline/rank`
- REST Type: GET
- Request params:

```
{
    *ori: string = "origin",
    *dst: string = "destination",
    *limit: int = "idk what this is ?",
    start: (date format?) = "initial date to be considered",
    end: (date format?) = "end date to be considered",
    weights: array of ints = [can_weight, div_weight, del_weight]
    //*can_weight: int from 0 to 100 = "cancelation weight",
    //*div_weight: int from 0 to 100 = "diversion weight",
    //*del_weight: int from 0 to 100 = "delay weight",
    // I like the idea of using an array to deal with the problem of
    // requiering that all have to be inputed or none, but i accept
    // other interpretations.
    (any more ?)
}
```

- Response params:

```
{
    airlines: [
        {
```

```
            name: string = "the name of the airline",
            r_score: float = "reliability score",
            can_per: float = "percentage of cancelations",
            div_per: float = "percentage of diversions",
            del_per: float = "percentage of delays",
            max_del: float = "maximum delay",
            min_del: float = "minimum delay",
            ... (more ?)
        },
        ...
    ]
}
```

Use Case 3:

User will get general statistics about flights with certain conditions

- Endpoint: `/flights/statistics`
- REST Type: GET
- Request params:

```
{
    *airline: string = "possible filter by airline",
    *origin: string = "possible filter by origin",
    *destination: string = "possible filter by destination",
    start: (date format?) = "start date to be queried from",
    end: (date format?) = "end date to be queried to"
}
```

- Response params:

```
{
    can_per: float = "percentage of cancelations",
    div_per: float = "percentage of diversions",
    del_per: float = "percentage of delays",
    avg_del: float = "average delay",
    max_del: float = "maximum delay",
    min_del: float = "minimum delay"
    (more ?)
}
```

Use Case 4:

User will ask the api to predict a future flight

- Endpoint: `/flights/forecast`
- REST Type: GET

- Request params:

```
{
    ori: string = "origin",
    dst: string = "destination",
    arl: string = "airline",
    date: (date format?)="date"
}
```

- Response params:

```
{
    can_prb: float = "cancelation probability",
    div_prb: float = "diversion probability",
    exp_del: float = "expected delay"
}
```

Use Case 5:

Admin will update the information about a flight

- Endpoint:
- REST Type: POST (?)
- Request params:

```

```

- Response params:

```

```

Use Case 6:

Admin delete the information about a flight

- Endpoint:
- REST Type: DELETE
- Request params:

```

```

- Response params:

```

```

Use Case 7:

Admin will add the information about a flight to the db

- Endpoint:
- REST Type:
- Request params:

```

```

- Response params:

```

```

Use Case Diagram example: